Patent claims

1. 1,3-Dimethylbutylcarboxanilides of the formula (I)

in which

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R¹ represents hydrogen, C₁-C₈-alkyl, C₁-C₆-alkylsulphinyl, C₁-C₆-alkylsulphonyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-haloalkyl, C₁-C₄-haloalkylthio, C₁-C₄-haloalkylsulphinyl, C₁-C₄-haloalkylsulphonyl, halo-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; formyl, formyl-C₁-C₃-alkyl, (C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl; halo-(C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, halo-(C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl having in each case 1 to 13 fluorine, chlorine and/or bromine atoms;

 $(C_1-C_8-alkyl)$ carbonyl, $(C_1-C_8-alkoxy)$ carbonyl, $(C_1-C_4-alkoxy-C_1-C_4-alkyl)$ carbonyl, $(C_3-C_8-cycloalkyl)$ carbonyl; $(C_1-C_6-haloalkyl)$ carbonyl, $(C_1-C_6-haloalkoxy)$ carbonyl, $(C_3-C_8-haloalkoxy)$ carbonyl, $(C_3-C_8-haloalkoxy)$ carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; or $-C(=O)C(=O)R^3$, $-CONR^4R^5$ or $-CH_2NR^6R^7$,

R² represents hydrogen, fluorine, chlorine, methyl or trifluoromethyl,

R³ represents hydrogen, C₁-C₈-alkyl, C₁-C₈-alkoxy, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-haloalkyl, C₁-C₆-haloalkoxy, halo-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

R⁴ and R⁵ independently of one another each represent hydrogen, C₁-C₈-alkyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₈-haloalkyl, halo-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

R⁴ and R⁵ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle having 5 to 8 ring atoms which is optionally mono- or polysubstituted by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl, where the heterocycle may contain 1 or 2 further non-adjacent heteroatoms from the group consisting of oxygen, sulphur and NR⁸,

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- R⁶ and R⁷ independently of one another represent hydrogen, C₁-C₈-alkyl, C₃-C₈-cycloalkyl; C₁-C₈-haloalkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,
- R⁶ and R⁷ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle having 5 to 8 ring atoms which is optionally mono- or polysubstituted by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl, where the heterocycle may contain 1 or 2 further non-adjacent heteroatoms from the group consisting of oxygen, sulphur and NR⁸,
- R⁸ represents hydrogen or C₁-C₆-alkyl,

A represents the radical of the formula (A1)

with the proviso,

(A1) in which

- R⁹ represents hydrogen, hydroxyl, formyl, cyano, fluorine, chlorine, bromine, nitro, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₃-C₆-cycloalkyl, C₁-C₄-haloalkyl, C₁-C₄-haloalkylthio having in each case 1 to 5 halogen atoms, aminocarbonyl or aminocarbonyl-C₁-C₄-alkyl,
- R¹⁰ represents hydrogen, chlorine, bromine, iodine, cyano, C₁-C₄-alkyl, C₁-C₄-alkylthio or C₁-C₄-haloalkyl having 1 to 5 halogen atoms,
- R¹¹ represents hydrogen, C₁-C₄-alkyl, hydroxyl-C₁-C₄-alkyl, C₂-C₆-alkenyl, C₃-C₆-cycloalkyl, C₁-C₄-alkylthio-C₁-C₄-alkyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-haloalkylthio-C₁-C₄-alkyl, C₁-C₄-haloalkoxy-C₁-C₄-alkyl having in each case 1 to 5 halogen atoms, or represents phenyl,
- a) that R^9 does not represent trifluoromethyl, difluoromethyl, methyl or ethyl if R^{10} represents hydrogen or chlorine, R^{11} represents methyl and R^1 and R^2

simultaneously represent hydrogen,

that R⁹ does not represent methyl, difluorochloromethyl, trifluoromethyl, difluoromethyl, chlorine or bromine if R¹⁰ represents hydrogen, fluorine, trifluoromethyl or methyl, R¹¹ represents methyl, trifluoromethyl, methoxymethyl or trifluoromethoxymethyl and R¹ represents (C₁-C₆-alkyl)carbonyl, (C₁-C₆-alkoxy)carbonyl, (C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl; (C₁-C₆-haloalkyl)carbonyl, (C₁-C₆-haloalkoxy)carbonyl, (halo-C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

or

Α represents the radical of the formula (A2)

(A2) in which

 R^{12} and R^{13} independently of one another represent hydrogen, halogen, $C_1\text{-}C_4\text{-alkyl}$ or C₁-C₄-haloalkyl having in each case 1 to 5 halogen atoms and

 R^{14} represents halogen, cyano or C₁-C₄-alkyl, or C₁-C₄-haloalkyl or C₁-C₄haloalkoxy having in each case 1 to 5 halogen atoms,

with the proviso that R¹⁴ does not represent methyl if R¹² and R¹³ represent hydrogen or methyl and R¹ and R² simultaneously represent hydrogen,

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Α represents the radical of the formula (A3)

(A3) in which

R¹⁵ and R¹⁶ independently of one another represent hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms and

 R^{17} represents hydrogen, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms.

or

Α represents the radical of the formula (A4)

(A4) in which

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 R^{18} represents halogen, hydroxyl, cyano, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄alkylthio, C₁-C₄-haloalkyl, C₁-C₄-haloalkylthio or C₁-C₄-haloalkoxy having in each case 1 to 5 halogen atoms,

 R^{19} represents hydrogen, halogen, cyano, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄alkylthio, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy having in each case 1 to 5 halogen atoms, C₁-C₄-alkylsulphinyl or C₁-C₄-alkylsulphonyl,

with the proviso,

- that R¹⁸ does not represent trifluoromethyl, methyl, chlorine or methylthio a) if R¹⁹ represents hydrogen and R¹ and R² simultaneously represent hydrogen,

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b) that R¹⁸ does not represent methyl, difluorochloromethyl, trifluoromethyl, difluoromethyl, chlorine or bromine if R19 represents hydrogen and R1

represents $(C_1-C_6-alkyl)$ carbonyl, $(C_1-C_6-alkoxy)$ carbonyl, $(C_1-C_4-alkoxy-C_1-C_4-alkyl)$ carbonyl; $(C_1-C_6-haloalkyl)$ carbonyl, $(C_1-C_6-haloalkoxy)$ carbonyl, $(halo-C_1-C_4-alkoxy-C_1-C_4-alkyl)$ carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

5 or

A represents the radical of the formula (A5)

with the proviso, that R¹ and R² do not simultaneously represent hydrogen if A represents A5,

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A represents the radical of the formula (A6)

(A6) in which

R²⁰ represents C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms,

or

A represents the radical of the formula (A7)

(A7) in which

R²¹ represents C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms,

or

A represents the radical of the formula (A8)

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(A8) in which

 R^{22} and R^{23} independently of one another represent hydrogen, halogen, amino, $C_1\text{-}C_4\text{-}alkyl$ or $C_1\text{-}C_4\text{-}haloalkyl$ having 1 to 5 halogen atoms and

R²⁴ represents hydrogen, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms,

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with the proviso that R^{24} does not represent methyl if R^{22} and R^{23} represent hydrogen or methyl and R^{1} and R^{2} simultaneously represent hydrogen,

or

A represents the radical of the formula (A9)

(A9) in which

 R^{25} and R^{26} independently of one another represent hydrogen, halogen, amino, nitro, C_1 - C_4 -alkyl or C_1 - C_4 -haloalkyl having 1 to 5 halogen atoms and R^{27} represents halogen, C_1 - C_4 -alkyl or C_1 - C_4 -haloalkyl having 1 to 5 halogen

atoms,

or

A represents the radical of the formula (A10)

(A10) in which

R²⁸ represents hydrogen, halogen, amino, C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)-amino, cyano, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms and

R²⁹ represents halogen, hydroxyl, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₃-C₆-cycloalkyl, C₁-C₄-haloalkyl or C₁-C₄-haloalkoxy having in each case 1 to 5 halogen atoms,

with the proviso,

- a) that R²⁹ does not represent trifluoromethyl, difluoromethyl, methyl or ethyl if R²⁸ represents hydrogen or methyl and R¹ and R² simultaneously represent hydrogen,
- b) that R²⁹ does not represent methyl, difluorochloromethyl, trifluoromethyl, difluoromethyl, chlorine or bromine if R²⁸ represents methyl, trifluoromethyl, methoxymethyl or trifluoromethoxymethyl and R¹ represents (C₁-C₆-alkyl)carbonyl, (C₁-C₆-alkoxy)carbonyl, (C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl; (C₁-C₆-haloalkyl)carbonyl, (C₁-C₆-haloalkoxy)carbonyl, (halo-C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

or

A represents the radical of the formula (A11)

(A11) in which

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R³⁰ represents hydrogen, halogen, amino, C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)-amino, cyano, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms and

R³¹ represents halogen, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms,

or

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A represents the radical of the formula (A12)

(A12) in which

R³² represents hydrogen, halogen, C₁-C₄-alkyl or C₁-C₄-haloalkyl having 1 to 5 halogen atoms,

with the proviso that R³² does not represent chlorine if R¹ and R² simultaneously represent hydrogen,

or

A represents the radical of the formula (A13)

(A13) in which

R³³ represents halogen, hydroxyl, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-haloalkyl, C₁-C₄-haloalkylthio or C₁-C₄-haloalkoxy having in each case 1 to 5 halogen atoms,

or

A represents the radical of the formula (A14)

(A14) in which

 R^{34} represents C_1 - C_4 -alkyl.

2. 1,3-Dimethylbutylcarboxanilides of the formula (I) according to Claim 1 in which

25 R¹ represents hydrogen, C₁-C₆-alkyl, C₁-C₄-alkylsulphinyl, C₁-C₄-alkylsulphonyl, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, C₁-C₄-haloalkylthio, C₁-C₄-haloalkylsulphinyl, C₁-C₄-haloalkylsulphonyl, halo-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; formyl, formyl-C₁-C₃-alkyl, (C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, 10-(C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, halo-(C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, halo-(C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl

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(C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl having in each case 1 to 13 fluorine, chlorine and/or bromine atoms;

(C₁-C₆-alkyl)carbonyl, (C₁-C₄-alkoxy)carbonyl, (C₁-C₃-alkoxy-C₁-C₃-alkyl)carbonyl, (C₃-C₆-cycloalkyl)carbonyl; (C₁-C₄-haloalkyl)carbonyl, (C₁-C₄-haloalkoxy)carbonyl, (halo-C₁-C₃-alkoxy-C₁-C₃-alkyl)carbonyl, (C₃-C₆-halocycloalkyl)carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; or -C(=O)C(=O)R³, -CONR⁴R⁵ or -CH₂NR⁶R⁷,

R² represents hydrogen, fluorine, chlorine, methyl or trifluoromethyl,

R³ represents hydrogen, C₁-C₆-alkyl, C₁-C₄-alkoxy, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, halo-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

R⁴ and R⁵ independently of one another represent hydrogen, C₁-C₆-alkyl, C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, halo-C₁-C₃-alkoxy-C₁-C₃-alkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms.

R⁴ and R⁵ furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle having 5 or 6 ring atoms which is optionally monot to tetrasubstituted by identical or different substituents from the group consisting of halogen and C₁-C₄-alkyl, where the heterocycle may contain 1 or 2 further non-adjacent heteroatoms from the group consisting of oxygen, sulphur and NR⁸,

R⁶ and R⁷ independently of one another represent hydrogen, C₁-C₆-alkyl, C₃-C₆-cycloalkyl; C₁-C₄-haloalkyl, C₃-C₆-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

 R^6 and R^7 furthermore together with the nitrogen atom to which they are attached form a saturated heterocycle having 5 or 6 ring atoms which is optionally mono- or polysubstituted by identical or different substituents from the group consisting of halogen and C_1 - C_4 -alkyl, where the heterocycle may contain 1 or 2 further non-adjacent heteroatoms from the group consisting of oxygen, sulphur and NR^8 ,

R⁸ represents hydrogen or C₁-C₄-alkyl,

A represents the radical of the formula (A1)

(A1) in which

 R^9

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methyl, ethyl, isopropyl, methoxy, ethoxy, methylthio, ethylthio, cyclopropyl, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy having in each case 1 to 5 fluorine, chlorine and/or bromine atoms, trifluoromethylthio, difluoromethylthio, aminocarbonyl, aminocarbonylmethyl or aminocarbonylethyl, R^{10}

represents hydrogen, hydroxyl, formyl, cyano, fluorine, chlorine, bromine,

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represents hydrogen, chlorine, bromine, iodine, methyl, ethyl, methoxy, ethoxy, methylthio, ethylthio or C1-C2-haloalkyl having 1 to 5 halogen atoms, R^{11}

hydroxyethyl, cyclopropyl, cyclopentyl, cyclohexyl or phenyl, with the proviso,

a)

that R9 does not represent trifluoromethyl, difluoromethyl, methyl or ethyl if R¹⁰ represents hydrogen or chlorine, R¹¹ represents methyl and R¹ and R² simultaneously represent hydrogen.

represents hydrogen, methyl, ethyl, n-propyl, isopropyl, C1-C2-haloalkyl

having 1 to 5 fluorine, chlorine and/or bromine atoms, hydroxymethyl,

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that R9 does not represent methyl, difluorochloromethyl, trifluoromethyl, b) difluoromethyl, chlorine or bromine if R¹⁰ represents hydrogen, fluorine, trifluoromethyl or methyl, R¹¹ represents methyl, trifluoromethyl, methoxymethyl or trifluoromethoxymethyl and R1 represents (C1-C6alkyl)carbonyl, $(C_1-C_6-alkoxy)$ carbonyl, $(C_1-C_4-alkoxy-C_1-C_4-alkyl)$ carbonyl; (C₁-C₆-haloalkyl)carbonyl, (C₁-C₆-haloalkoxy)carbonyl, (halo-C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

or Α

represents the radical of the formula (A2)

(A2) in which

R¹² and R¹³ independently of one another represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C1-C2-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

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 R^{14} represents fluorine, chlorine, bromine, iodine, cyano, methyl, ethyl, C1-C2haloalkyl or C₁-C₂-haloalkoxy having in each case 1 to 5 fluorine, chlorine and/or bromine atoms,

with the proviso that R¹⁴ does not represent methyl if R¹² and R¹³ represent hydrogen or methyl and R¹ and R² simultaneously represent hydrogen,

(A3) in which

or

A represents the radical of the formula (A3)

R¹⁵ and R¹⁶ independently of one another represent hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

R¹⁷ represents hydrogen, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

or

10 A represents the radical of the formula (A4)

$$\mathbb{R}^{10}$$
 \mathbb{R}^{18} (A4) in which

R¹⁸ represents fluorine, chlorine, bromine, iodine, hydroxyl, cyano, C₁-C₄-alkyl, methoxy, ethoxy, methylthio, ethylthio, difluoromethylthio, trifluoromethylthio, C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy having in each case 1 to 5 fluorine, chlorine and/or bromine atoms,

R¹⁹ represents hydrogen, fluorine, chlorine, bromine, iodine, cyano, C₁-C₄-alkyl, methoxy, ethoxy, methylthio, ethylthio, C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy having in each case 1 to 5 fluorine, chlorine and/or bromine atoms, C₁-C₂-alkylsulphinyl or C₁-C₂-alkylsulphonyl,

with the proviso,

- a) that R¹⁸ does not represent trifluoromethyl, methyl, chlorine or methylthio if R¹⁹ represents hydrogen,
- b) that R¹⁸ does not represent methyl, difluorochloromethyl, trifluoromethyl, difluoromethyl, chlorine or bromine if R¹⁹ represents hydrogen and R¹ represents (C₁-C₆-alkyl)carbonyl, (C₁-C₆-alkoxy)carbonyl, (C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl; (C₁-C₆-haloalkyl)carbonyl, (C₁-C₆-haloalkoxy)carbonyl, (halo-C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

or

30 A represents the radical of the formula (A5)

$$C_{O}$$
 CH_3 $(A5)$,

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with the proviso that R¹ and R² do not simultaneously represent hydrogen if A represents A5,

or

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A represents the radical of the formula (A8)

(A8) in which

R²² and R²³ independently of one another represent hydrogen, fluorine, chlorine, bromine, amino, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

R²⁴ represents hydrogen, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

or

A represents the radical of the formula (A9)

(A9) in which

R²⁵ and R²⁶ independently of one another represent hydrogen, fluorine, chlorine, bromine, amino, nitro, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

R²⁷ represents fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

or

A represents the radical of the formula (A10)

(A10) in which

R²⁸ represents hydrogen, fluorine, chlorine, bromine, amino, C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)amino, cyano, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

R²⁹ represents fluorine, chlorine, bromine, hydroxyl, methyl, ethyl, methoxy, ethoxy, cyclopropyl or C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy having in each case 1 to 5 fluorine, chlorine and/or bromine atoms,

with the proviso,

- that R^{29} does not represent trifluoromethyl, difluoromethyl, methyl or ethyl if R^{28} represents hydrogen or methyl and R^1 and R^2 simultaneously represent hydrogen,
- b) that R²⁹ does not represent methyl, difluorochloromethyl, trifluoromethyl, difluoromethyl, chlorine or bromine if R¹¹ represents methyl, trifluoromethyl, methoxymethyl or trifluoromethoxymethyl and R¹ represents (C₁-C₆-alkyl)carbonyl, (C₁-C₆-alkoxy)carbonyl, (C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl; (C₁-C₆-haloalkyl)carbonyl, (C₁-C₆-haloalkoxy)carbonyl, (halo-C₁-C₄-alkoxy-C₁-C₄-alkyl)carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms,

or

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A represents the radical of the formula (A11)

(A11) in which

R³⁰ represents hydrogen, fluorine, chlorine, bromine, amino, C₁-C₄-alkylamino, di-(C₁-C₄-alkyl)amino, cyano, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

R³¹ represents fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms,

or A

represents the radical of the formula (A12)

(A12) in which

R³² represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl or C₁-C₂-haloalkyl having 1 to 5 fluorine, chlorine and/or bromine atoms, with the proviso that R³² does not represent chlorine if R¹ and R² simultaneously represent hydrogen,

or

A represents the radical of the formula (A13)

(A13) in which

R³³ represents fluorine, chlorine, bromine, iodine, hydroxyl, C₁-C₄-alkyl, methoxy, ethoxy, methylthio, ethylthio, difluoromethylthio,

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trifluoromethylthio, C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy having in each case 1 to 5 fluorine, chlorine and/or bromine atoms.

- 3. 1,3-Dimethylbutylcarboxanilides of the formula (I) according to Claim 1 or 2 in which R¹ represents formyl.
 - 4. 1,3-Dimethylbutylcarboxanilides of the formula (I) according to Claim 1 or 2 in which R¹ represents -C(=O)C(=O)R³, where R³ is as defined in Claim 1 or 2.
- 10 5. 1,3-Dimethylbutylcarboxanilides of the formula (I) according to Claim 1 or 2 in which A represents A1.
 - 6. Process for preparing compounds of the formula (I) according to Claim 1, characterized in that
- a) carboxylic acid derivatives of the formula (II)

in which

A is as defined in Claim 1 and

X¹ represents halogen or hydroxyl,

are reacted with aniline derivatives of the formula (III)

$$\begin{array}{c|cccc}
HN & R^2 \\
R^1 & CH_3 & (III) \\
H_3C & CH_3
\end{array}$$

in which R1 and R2 are as defined in Claim 1,

if appropriate in the presence of a catalyst, if appropriate in the prescence of a condensing agent, if appropriate in the presence of an acid binder and if appropriate in the presence of a diluent,

or

b) hexylcarboxanilides of the formula (I-a)

in which A and R² are as defined in Claim 1, are reacted with halides of the formula (IV)

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 $R^{1-A} X^2$ (IV)

in which

X² represents chlorine, bromine or iodine,

represents C₁-C₈-alkyl, C₁-C₆-alkylsulphinyl, C₁-C₆-alkylsulphonyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-cycloalkyl; C₁-C₆-haloalkyl, C₁-C₄-haloalkylsulphinyl, C₁-C₄-haloalkylsulphonyl, halo-C₁-C₄-alkoxy-C₁-C₄-alkyl, C₃-C₈-halocycloalkyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; formyl, formyl-C₁-C₃-alkyl, (C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, (C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl; halo-(C₁-C₃-alkyl)carbonyl-C₁-C₃-alkyl, halo-(C₁-C₃-alkoxy)carbonyl-C₁-C₃-alkyl having in each case 1 to 13 fluorine, chlorine and/or bromine atoms;

 $(C_1-C_8-alkyl)$ carbonyl, $(C_1-C_8-alkoxy)$ carbonyl, $(C_1-C_4-alkoxy-C_1-C_4-alkyl)$ carbonyl, $(C_3-C_8-cycloalkyl)$ carbonyl; $(C_1-C_6-haloalkyl)$ carbonyl, $(C_1-C_6-haloalkoxy)$ carbonyl, $(halo-C_1-C_4-alkoxy-C_1-C_4-alkyl)$ carbonyl, $(C_3-C_8-halocycloalkyl)$ carbonyl having in each case 1 to 9 fluorine, chlorine and/or bromine atoms; or $-C(=O)C(=O)R^3$, $CONR^4R^5$ or $-CH_2NR^6R^7$,

where R³, R⁴, R⁵, R⁶ and R⁷ are as defined in Claim 1, in the presence of a base and in the presence of a diluent.

- 7. Compositions for controlling unwanted microorganisms, characterized in that they comprise at least one 1,3-dimethylbutylcarboxanilide of the formula (I) according to Claim 1 in addition to extenders and/or surfactants.
- 8. Use of 1,3-dimethylbutylcarboxanilides of the formula (I) according to Claim 1 for controlling unwanted microorganisms.
- 9. Method for controlling unwanted microorganisms, characterized in that 1,3-30 dimethylbutylcarboxanilides of the formula (I) according to Claim 1 are applied to the microorganisms and/or their habitat.
 - 10. Process for preparing compositions for controlling unwanted microorganisms, characterized in that 1,3-dimethylbutylcarboxanilides of the formula (I) according to Claim 1 are mixed with extenders and/or surfactants.